

## CLAIMS

1. A cam apparatus for knitting a fabric in a weft knitting machine having front and rear needle beds facing each other at a needle bed gap, the cam apparatus comprising:

a knitting cam mounted on a carriage moving along each of the needle beds, for acting on a needle body of a compound needle arranged on each of the carriages; and

a slider cam mounted on a side of the carriage facing the needle bed gap, for acting on a butt of a slider and driving for knitting a fabric so that the slider is cooperated with the needle body driven by the knitting cam,

wherein the cam apparatus comprises a group of transfer cams provided in series to the knitting cam on at least one of the carriages, and a group of receiving cams provided in series to the knitting cam on the carriage which is opposed at the needle bed gap to the carriage provided with the group of transfer cams,

the group of transfer cams including:

a slider transfer raising cam disposed at an ending position of a cam route through which the butt of the slider is guided by the slider cam, the slider transfer raising cam being capable of control of change-over between driving and non-driving of the butt of the

slider is carried out, and when change-over to driving of the slider is carried out, the slider transfer raising cam guiding the butt of the slider to convey the slider to a cam route in which a tongue of the slider advances farther toward the needle bed gap than a hook of the needle body does; and

a transfer cam disposed on the cam route to which the butt of the slider is guided by the slider transfer raising cam, for driving the slider to advance to a transfer position where a knitted loop can be transferred at a farther advanced position toward the needle bed gap than a position advanced by the slider cam, and

the group of receiving cams including:

a transfer-side knitted loop receiving cam disposed at a position facing the transfer cam of the group of transfer cams, the transfer-side knitted loop receiving cam being capable of control of change-over between driving and non-driving of the needle body, and when change-over to driving of the needle body is carried out, the transfer-side knitted loop receiving cam driving the needle body to convey a hook of the needle body to a knitted loop receiving position where a knitted loop can be received from the slider advancing to the transfer position by the transfer cam; and

a slider receiving raising cam, with respect to

movement of the carriage, disposed in a vicinity of a position where the driving of the needle body is started by the knitted loop receiving cam, the slider receiving raising cam being capable of controlling change-over between driving and non-driving of the butt of the slider, and when change-over to driving of the butt of the slider is carried out, the slider receiving raising cam guiding the butt of the slider to convey the slider to a receiving retention route for retaining the knitted loop in which a tongue of the slider advances farther toward the needle bed gap than a hook of the needle body does,

wherein the group of transfer cams further include a transfer-side knitted loop transfer cam disposed at a position facing a receiving retention route through which the slider is guided by the receiving raising cam of the group of receiving cams, which transfer-side knitted loop transfer cams are capable of control of change-over between driving and non-driving of the needle body, and conveys the hook of the needle body independently or together with the slider to the knitted loop receiving position when change-over to driving of the needle body is carried out.

2. The cam apparatus of claim 1, wherein the compound needle is provided with a needle jack in order to be

driven by the knitting cam to perform a knitting operation;

the butt of the slider is constituted so as to be sank into a needle groove and no longer subjected to driving from the group of receiving cams by moving the needle jack into the needle groove; and

a needle jack guide cam and a presser are further included, the needle jack guide being provided in series to the group of receiving cams and more outwardly from the knitting cam having a pressing slope for pressing a butt of the needle jack so as to move the butt of the slider into the needle groove, and a cam face for guiding the butt of the needle jack to the pressing slope so that the butt of the slider passes through the group of transfer cams, the presser being selectively capable of pressing the needle jack so as to pass the needle jack without engaging with the cam face of the needle jack guide cam.

3. The cam apparatus of claim 1 or 2, wherein the group of transfer cams and the group of receiving cams are respectively provided on the carriages which are respectively disposed on the front and rear needle beds.

4. The cam apparatus of any one of claims 1 to 3,

wherein each of the carriages further comprises:

a knitting cam for execution of one knitting operation;

a needle selection mechanism disposed on two sides of the knitting cam with respect to a moving direction of the carriage, the needle selection mechanism performing a needle selection operation for selecting a needle to one position among different three control positions; and

a movable presser disposed at one position of three positions, the movable presser being capable of controlling the knitting operation.